

Application Review

Issue Date:

Region: Mooresville Regional Office
County: Catawba
NC Facility ID: 1800523
Inspector's Name: Alejandra Cruz
Date of Last Inspection: 11/13/2020
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): R&D Plastics of Hickory, Ltd.</p> <p>Facility Address: R&D Plastics of Hickory, Ltd. 345 26th Street Drive SE Hickory, NC 28602</p> <p>SIC: 3089 / Plastics Products, Nec NAICS: 326199 / All Other Plastics Product Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p style="text-align: center;">Permit Applicability (this application only)</p> <p>SIP: 15A NCAC 02D .0530, 15A NCAC 02D .1806 NSPS: N/A NESHAP: N/A PSD: N/A PSD Avoidance: 15A NCAC 02Q .0317 for 15 NCAC 2D .0530 NC Toxics: 15 A NCAC 02Q .0711 112(r): Yes Other: N/A</p>
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Contact Data			Application Data
<p style="text-align: center;">Facility Contact</p> <p>Davie Edwards Plant Manager (828) 431-4660 345 26th Street Drive SE Hickory, NC 28602</p>	<p style="text-align: center;">Authorized Contact</p> <p>David Duncan, Jr. President - CEO (828) 431-4660 345 26th Street Drive SE Hickory, NC 28602</p>	<p style="text-align: center;">Technical Contact</p> <p>Paul Johnson Plant Process Engineer (828) 431-4660 345 26th Street Drive SE Hickory, NC 28602</p>	<p>Application Number: 1800523.20A Date Received: 10/12/2020 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 09321/T05 Existing Permit Issue Date: 06/23/2016 Existing Permit Expiration Date: 05/31/2021</p>

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2019	---	---	29.40	---	---	---	--- [---]
2018	---	---	74.89	---	---	---	--- [---]
2017	---	---	67.99	---	---	---	--- [---]
2016	---	---	71.30	---	---	---	--- [---]
2015	---	---	73.30	---	---	---	--- [---]

<p>Review Engineer: Alice Wessner</p> <p>Review Engineer's Signature: Date:</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 09321/T06 Permit Issue Date: Permit Expiration Date:</p>
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1. Purpose of Application

R & D Plastics of Hickory, Ltd. which is located in Hickory, Catawba County, North Carolina, currently holds a Title V Permit No. 09321T05 with an expiration date of May 31, 2021 for producing various plastic foam products. This permit application is for a permit renewal. The renewal application was received on October 12, 2020, which is not nine months prior to the expiration date. Therefore, the existing permit may expire if the renewed permit is **not** issued by May 31, 2021. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

2. Facility Description

R & D Plastics manufactures extruded furniture foam, pipe insulation foam and fiber optic filler rods. The process utilizes isobutene for the creation of the foam. Low density polyethylene pellets are transported to the plant by truck and then stored in silos. Polyethylene resins are transferred to blending stations where other additives are mixed and fed to screw-type foam extruders. The resin is heated in the extruder to produce a homogeneous melt. The blowing agent, isobutane, is injected into the polymer by way of a high-pressure system. A large revolving screw directs the melted resin toward a die to produce the desired shape of the final product. The product is cooled before being packaged in the warehouse.

3. Application Chronology

June 23, 2016	Air Permit 09321T05 was issued with an expiration date of May 31, 2021
October 12, 2020	Permit application 1800523.20A was received for Title V renewal. The application was not received within nine months prior to the expiration date.
December 22, 2020	Draft permit and permit review forwarded to supervisors for comments.
December 23, 2020	Received comments from Permitting Supervisor
December 30, 2020	Draft permit and permit review forwarded to Bruce Ingle and Melinda Wolanin of the Mooresville Regional Office and DAQ Stationary Source Compliance Branch.
January 12, 2021	Received comments from MRO. Corrections made.
January 13, 2021	Draft permit sent to David Duncan, Jr. of R & D Plastics.
January 15, 2020	Received comments from R & D Plastics. No comments noted.
XXXXXX XX, 2021	Permit issued.

4. Permit Changes

The following table describes the changes to the current permit as part of the renewal.

Page(s)	Section	Description of Changes
Cover page and throughout	-	Updated all dates and permit revision numbers.
Cover letter page 3	Attachment Insignificant Activities	Updated language in footnote 3
3	2.1 A table	Deleted the 15A NCAC 02D .0958 Work Practices for Sources of VOCs Changed Odorous Emissions Limits/Standards reference from Section 2.2 B.3 to B2.
4	2.1 A	Added Condition 2.1 A.1.c and renumbered section. Added the language "the firing of isobutane in these sources" to Condition 2.1 A.2.c.
5	2.2 A.1	Revised the PSD Avoidance condition to add an equation to calculate the VOC emissions.
5	2.2 B	Updated language in Section 2.2 B.1.a through d. Updated CAS Number for Formaldehyde. Deleted Section 2.2 B.2, 15A NCAC 02D .0958 Work Practices for Sources of VOCs.

Page(s)	Section	Description of Changes
7	3	Updated General Conditions to Version 5.5.

5. Regulatory Review

The facility is currently subject to the following regulations:

- a. 15A NCAC 02D .0515 “Particulates from Miscellaneous Industrial Processes”
- b. 15A NCAC 02D .0521 “Control of Visible Emissions”
- c. 15A NCAC 02D .1806 “Control and Prohibition of Odorous Emissions”
- d. 15A NCAC 02Q .0317 “Avoidance Conditions (for 15A NCAC 02D .0530, Prevention of Significant Deterioration)”
- e. 15A NCAC 02Q .0711 “Emission Rates Requiring a Permit”

An extensive review for each applicable regulation is not included in this document, as the facility’s status with respect to these regulations has not changed. For a discussion of MACT, CAM and PSD requirements, see Section 6. The permit will be updated to reflect the most current stipulations for all applicable requirements.

6. NSPS, NESHAP/MACT, PSD, 112(r) , CAM and GACT

NSPS

No emission sources at the facility are subject to New Source Performance Standards (NSPS). This renewal does not affect the NSPS status of this facility.

NESHAPS/MACT

The facility is not subject to NESHAP CCCCCC (6C) because it does not have gasoline storage tanks. Also, the facility is not subject to the NESHAP ZZZZ (4Z) because it does not have a generator or fire pump. No emission sources at the facility are subject to any other rules under 40 CFR Part 63. This renewal does not affect the MACT status of this facility.

PSD

All counties in North Carolina were re-designated as attainment effective August 27, 2015. R & D Plastics has accepted an avoidance condition limiting VOCs to less than 249 tons per year to avoid being a major source for PSD. This permit action does not affect this status.

R & D Plastics is a PSD-minor source. To comply with this permit and to avoid the applicability of 15A NCAC 02D .0530, “Prevention of Significant Deterioration (PSD)”, the facility’s VOC emissions from sources (**ID Nos. ES-Line1, ES-Line2, and ES-Line3**) shall be less than 249 tons per year per consecutive 12-month period. The permit currently includes a PSD Avoidance condition with a 825 ton per year usage limit of Isobutane. The limit will be removed from the permit and replaced with the following equation and condition for showing compliance:

$$\text{VOC emissions} = \text{Monthly isobutane usage (tons/month)} * (100\% - \text{Retention factor}/100)$$

Where

Retention Factor = 47.6%, which represents the site-specific value of VOCs retained in the product.

No change to this limit is required under this permit renewal, and continued compliance is anticipated.

All counties in NC were re-designated as attainment effective August 27, 2015. [Ref: Federal Register /Vol. 80, No. 144 /Tuesday, July 28, 2015 /Rules and Regulations.] R & D Plastics is minor for PSD because it has accepted an avoidance condition under 15A NCAC 02D .0530 applicability, to limit VOC emissions to less than 249 tons per

year. This permit does not affect the PSD status of the facility. Although Catawba County's minor source baseline for PM₁₀ has been triggered; there are no emissions increases or decreases associated with this permit.

112(r)

R & D Plastics is subject to the 112(r) "Prevention of Accidental Releases" requirements because it stores isobutane (**ID No. IES-Tank**) that is used as a foam blower in amounts greater than the applicability threshold. R & D Plastics is required to revise and update the Risk Management Plan (RMP) submitted under 40 CFR 68.150 according to the requirements specified in 68.190(b)(2) through (b)(7). The most recent inspection states that the facility submitted the RMP (EPA ID# 1000 0018 8254) on February 12, 2018. If no further changes occur, R & D Plastics of Hickory's next RMP will not be due until February 12, 2023.

CAM

R & D Plastics is not currently subject to any compliance assurance monitoring standards because there are no control devices at this facility. This permit action does not affect this status

GACT

There are no Generally Available Control Technology (GACT) regulations that apply to the Plastics Product Manufacturing industry.

7. Facility-Wide Air Toxics (State enforceable Only)

Facility-wide affected sources are subject to the TPER as listed in 15A NCAC 02Q .0711 for acetaldehyde, formaldehyde and methyl ethyl ketone. The potential emissions for all three pollutants are less than ten pounds per year. A permit to emit either of these pollutants in quantities above the TPER rates requires the submittal of a permit application. No changes are needed under this permit action.

8. Facility Emissions Review

There is no change in Title V potential emissions for this permit action. Actual emissions from previous years are listed on Page 1.

9. Compliance Status

DAQ has reviewed the compliance status for this facility for the last five years. The results are listed below.

- On September 10, 2020, NCDAQ issued an NOV for failure to report VOCs as per Condition 2.2 A.1(b).
- On October 28, 2019, NCDAQ issued R & D Plastics a NOV and Deficiency. An NOV for not conducting a Process Hazard Analysis and an audit per the schedule and an NOD for no documentation showing that the operating procedures for dealing with a regulated chemical has been certified on a yearly basis.
- On March 15, 2017, NCDAQ issued R & D Plastics a NOV for submittal of a late annual compliance certification.

All violations and notice of deficiency have been resolved.

During the most recent inspection conducted on September 23, 2019, Melinda Wolanin of the Mooresville Regional Office indicated the R & D Plastics, Ltd. of Hickory appeared to be in compliance with all applicable requirements.

10. Public Notice/EPA and Affected State(s) Review

A concurrent public notice period of 30 days and an EPA review period of 45 days are required for issuance of this Title V permit. A notice of the DRAFT Title V permit shall be made pursuant to 15 NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice

shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to the EPA. Also, pursuant to 15A NCAC 02Q .0522, a notice of the DRAFT Title V permit shall be provided to each affected State at or before the time notice is provided to the public according to 15A NCAC 02Q .0521.

EPA's 45 Day Review Period

Mr. Michael Sparks (USEPA Region IV, Chief, Air Permits Section) was provided a DRAFT permit for review on January, XX, 2021. The EPA 45-day review period ended on XXX, XX, 2021. No comments were offered or received.

Public Notice

The 30-day public notice of the DRAFT permit was posted on the NCDAQ website on January XX, 2021. No comments were offered or received.

11. Other Regulatory Considerations

- A PE seal is NOT required for this renewal application.
- A zoning consistency determination is NOT required for this renewal application.

12. Recommendations

The permit renewal application for R & D Plastics of Hickory, Ltd. Facility located in Hickory, Catawba County, North Carolina has been reviewed by DAQ to determine compliance with all the procedures and requirements. The DAQ has determined that this facility is complying or will achieve compliance, as specified in this permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 09321T06.